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The Office action dated November 17, 2006, has been carefully reviewed and the foregoing amendment has been made in response thereto.

Claims 1-3, 6-15, and 37-38 stand rejected under 35 USC 103(a) as unpatentable over the Babin et al. (the '176 patent) in view of Tsujino (the '464 patent). Regarding Claims 13-15 the Office action cites the '464 patent for disclosing, in the context of a magnetic hard disk 22, a thin film sheet 54 of non-magnetic material located between a magnet 36 and a coil 32. Note that Claim 13 of the present application defines the invention such that the target component is mounted for rotation and a second component, supported for rotation between the target and a sensor, covers a path between the sensor and the target and is formed of material having relatively low magnetic permeability. The '464 patent neither teaches, discloses nor suggests a second component that is support for rotation and formed of material having low magnetic permeability. Sheet 54 is not supported for rotation; sheet 54 is not located between a target that is mounted for rotation and a sensor. The Office action indicates that the target 36 is disclosed in the '464 patent. Claim 13 states that the target is rotating, whereas the iron yoke 40 and magnet 36 are secured against rotation by attachments 48. Therefore, the '464 patent includes neither a rotating target nor a rotating second component, as Claim 13 defines the invention.

Carriage 30 does not rotate, it merely pivots (col. 3, ll. 16-18). The magnetic hard disk 22 rotates, but there is no second component that rotates between the sensor or head 24 and the target component 22. Claims 13-15 are patentable over the cited prior art references.

Similarly, with respect to Claims 37 and 38, there is no teaching or suggestion either in the '464 patent or the '176 patent of rotating a second component between the sensor and the target component and locating a second component between a sensor and a target component, such that the sensor is continuously blocked by the second component. Claims 37 and 38 are patentable over the cited prior art references.

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Regarding Claims 1-3 the Office action correctly acknowledges that the '176 patent fails to show that the second component continuously covers a path between the sensor and the target and is formed of low magnetic permeability material. In rejecting Claims 1-3, the Office action again cites the '464 patent for allegedly teaching a target 36 that is continuously hidden from the view of a sensor 32 by the second component 54. Again, Claim 1 recites that the target is supported for rotation and the second component is supported for rotation and located between the target and the sensor. The only target or sensor that rotates in the '464 patent is the magnetic hard disk. The magnet 36 does not rotate and the thin film 54 does not rotate. The Office action is incorrect in referring to magnet 36 as a target and to sensor 32 as the second component, because neither corresponds to the claims of the present application. Claims 1-3 are patentable over the cited prior art references.

Regarding Claim 16, the system defined there includes a second component supported for rotation between a target component and a sensor and a controller for determining a rotational speed of the target component based on values of a position signal over time. The second component blocks a path to the target component from a magnetic flux source. In the '464 patent the magnetic flux source may be considered to be the magnet 36, but the thin film sheet 54 of disclosed in the '464 patent is not supported for rotation; instead sheet 54 is fixed in position and closes a opening formed in the casing 12. The carriage that is located adjacent the thin sheet 54 does not rotate, but merely pivots as indicate by the double headed arrow shown in Figures 3, 4, 7, and 8. Neither the '464 patent nor the '176 patent describes, discloses, or suggests the system defined by Claims 16.

Claim 7 states that the surface variation on the target component includes radially extending teeth, each tooth spaced angularly from an adjacent tooth by a land. None of the cited prior art references, teaches the teeth and lands recited in Claim 7.

Regarding Claims 9-12, the Office action correctly concedes that the prior art references failed to disclose a second component formed of stainless steel formed by stamping at a temperature greater than 32 degrees and that the stainless steel has an instability factor less than 2.9%. The stainless steel has a concentration of martensite

that is less than 15%. The stainless steel has an instability factor that is less than 1%. In review of these limitations are recited in Claims 9-10, and the Office action has cited no prior art references with respect to them. However, the Office action concludes, in rejecting claims 9-12, that it is well known in the art to stamp stainless steel at a desired temperature. Claims 9-12 should not have been rejected without *prima facie* case showing that they are either anticipated by or obvious in view of the cited prior art.

Claim 4 adds to the elements of Claim 1 that the material of the second component has a concentration of martensite that is less than 30%. The Office action cites the patent of Garshelis (the '423 patent) for disclosing a magneto elastic torque sensor and that martensite has a permeability in the range of 10-100. None of the cited prior art references teaches or suggests the limitations of Claim 4.

Claim 5 adds to the limitations of Claim 1 that the material of the second component is a member of the group consisting of aluminum, titanium, and stainless steel. Claim 5 stands rejected under Babin and Tsujino, and further in view of Hansen (the '989 patent), which discloses a magnetic tracker. The Office action refers specifically to column 5, lines 28-31 of the '989 patent. The cited reference to the specification of the '989 patent fails to mention aluminum, titanium, stainless steel, or any of the limitations of Claim 1 or Claim 5.

None of the claims have been amended. They are all patentable over the cited prior art references.

We respectfully request that the examiner please change the correspondence address for this application to the following:

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